

ON CHRONIC SKIN DISEASES TREATED BY THE WATERS OF AIX-LA-CHAPELLE.

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THE hot springs at Aix-la-Chapelle were already in use for bathing purposes in the time of the Romans. It was most probably the celebrated Sixth Legion, which had won the honorable title of "Legio victria" by its glorious victories in Spain, that first erected splendid bathing-houses at our springs, known to the oldest authorities as "Aquæ," or "healing waters." The remains of these baths, built between 69 and 120 A.D., were dug out in 1878. Many ornaments and articles of feminine toilet were found in the canals and bath-rooms, and have, together with other curiosities, been placed in the museum of this city. The newly discovered foundations are accessible to all who are interested in these relics of a by-gone age.¹

From Germany the Sixth Legion went to Britain, and most probably erected the large building for warm baths at Bath—at the Aquæ Solis,—the foundations of which were laid bare in the last century.

The Roman buildings at Aix-la-Chapelle were destroyed by the invading barbarians, whose countless hordes of warriors carried death and desolation to the very walls of the

¹ "Ruins of the Roman Baths at Aix-la-Chapelle," Dr. Lersch, 1878.

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Eternal City. Six hundred years passed by before the first great German emperor, Charlemagne, rebuilt the baths on the same site. It is said that he discovered the hot springs whilst hunting in the woods, which at that time covered the neighborhood. The emperor was in the habit of bathing with his whole court in the long "piscines" or common baths, according to a custom which continued to exist up to the end of the Middle Ages.

In the Latin writings of the Middle Ages, Aix-la-Chapelle is called by the significant name of "Aquisgranum," from which the present German name of "Aachen" is derived.

About 1756 the celebrated English doctor, C. Lucas, in his well-known work, entitled "An Essay on Waters," gave the highest praise to the improved contrivances for private baths at Aix-la-Chapelle; and these arrangements have not since been changed, except for further improvement.

In 1655, shortly after the Thirty Years' War, the renowned Dr. Franz Blondel instituted the practice of drinking the waters as a means of great importance in curing certain diseases. He was much interested in Aix-la-Chapelle, and his discovery added greatly to the benefits of treatment at these baths; but in his time he must have met with much opposition from some of the medical men of his day, for in 1688, in his interesting work on "Thermal Aquisgranenses," we find him devoting two whole chapters to the refutation of the unfair charges brought against his treatment, by narrow-minded though scientific adversaries.

The sulphur-springs at Aix-la-Chapelle have continued up to the present time well-known and much used for their healing powers. These healing properties have been proved to exist by the experience of centuries, by the chemical composition of the water, and by their physiological effect on the system.

The water of our warm springs is very digestible. Its principal chemical ingredients are sulphur, chloride of sodium, and carbonate of soda. The waters of the Kaiserquelle, at Aix-la-Chapelle, contain in every 10,000 grammes or about 10 litres (3 gallons):

Chloride of sodium	. . .	26.1 grammes (nearly 7 drachms).
Carbonate of soda	. . .	6.4 " (1½ drachms).
Sulphurate of sodium	. . .	0.1 " (1½ grains).
In 10 litres (nearly 3 gallons) of gaseous elements		
Sulphurated hydrogen	. . .	0.3 grammes (4½ grains).

At our springs, therefore, we have the advantage of the united effects of sulphur with chloride of sodium and carbonate of soda, which is of great importance in the external and internal use of the waters. The heat of our springs rises as high as 131° Fahrenheit.

To a certain extent Aix-la-Chapelle is in complete contrast with England and North America, which, according to the geological condition of their soil, possess only cold sulphur-water springs, none of which can be called alkaline, as they are all impregnated with indigestible ingredients of sulphate of lime or magnesia. In England there are few warm springs of high temperature, with the exception of the one at Bath, which is far behind the Aix-la-Chapelle springs in warmth. In North America, in the States of New York and Virginia, which are so rich in sulphur-springs, no springs, as far as we know, have a higher temperature than 60° to 70° Fahrenheit; and those in Utah and Southern California, which resemble our springs as regards temperature, are not yet properly adapted for medical use.

Chronic skin diseases form one of the chief classes of illness at Aix-la-Chapelle.

A medical gentleman, who is thoroughly acquainted with our springs, Dr. Macpherson,¹ writes: "Aix-la-Chapelle has long been known to possess the chief sulphur baths of Germany, and is well known to English people. Every result that sulphur baths not at a great elevation, like several in the Pyrenees, can produce, is to be met with here; but rheumatism and cutaneous affections are the complaints most successfully treated. The baths are of established reputation, and possess a staff of experienced medical gentlemen, whose practice in a large city like Aix-la-Chapelle, is not limited too much to one set of diseases, as is the case at most other baths."

¹Dr. Macpherson's "Baths and Wells of Europe," 1869, p. 141.

It is almost impossible to realize all that has been gained for medical science by the local treatment of skin diseases. But the fact remains that for thousands of years the best doctors have pointed to bathing treatment, and more especially to sulphur baths, as the very best means of effecting a thorough cure in cases of local skin disease. "The steady growth of so many different mineral-water bathing-places, and the eloquent evidence of thousands of grateful patients cured at these baths, are the best proofs of their unfailing efficacy."¹

Chronic skin diseases are to be treated at the mineral springs more or less as constitutional affections.

The skin, like every other organ, cannot escape the influence of disease for any considerable time, when the principal organs are in an unhealthy state and the system is upset. The connection between these diseases still remains to be explained; experience can only prove it to exist.²

Scrofula is often combined with "lichen scrofulosorum" and "lupus"; in individuals whose health has been undermined by cachexia, we find acne cachecticorum; chlorotic patients are subject to changes in the color of the skin, pallor, seborrhœa, and effluvium capillitii. Rheumatism and gout form the foundation of lichen agrius (Willan); climatic or endemic influences, often of a malarial nature, which act by deteriorating the system generally, give rise to framboesia in the West Indies, to sibbens in Scotland, and to elephantiasis.³ Diseases of several organs are also liable to produce symptoms of many skin diseases. Pigmentation, icterus, urticaria, pruritus cutaneus, eczema—often of great obstinacy,—are the consequences of liver affections; and as a result of diseases of the uterus and ovaries we see the procreation of chloasma, acne rosacea, seborrhœa, and urticaria.⁴ Besides these morbid changes of internal organs of the body, skin diseases are often brought on by age, irregular living, and bad or unsuitable food.⁵

¹ "Physiology of the Skin," by Dr. Röhrig, 1876.

² "Lehrbuch der Hautkrankheiten," by Dr. Neumann, 1880, p. 62-66.

³ "Skin Diseases," by Dr. Tilbury Fox, 1873, p. 51.

⁴ "Lehrbuch der Hautkrankheiten," by Dr. Neumann.

⁵ "Lehrbuch der Hautkrankheiten," by Hebra.

Finally, observation proves that diseases of the nervous system, more especially of the vaso-motor nerves, are the agents, in several cases, leading to skin disease. We find this, according to the best authorities, in cases of herpes and pemphigus. In the genesis and prolongation of eczema, neurasthenia and functional nervous symptoms were constantly observed, and often played a very important part.¹ These observations show beyond doubt that many skin diseases are of constitutional origin. A further indisputable proof of the fact is that several skin diseases are hereditary; the disease passing from the parents to one or to all their children, or to their grandchildren. The frequent reappearance of these diseases in a patient apparently thoroughly cured, is a still stronger proof of the correctness of this theory. Success is, therefore, chiefly to be sought in a combination of local and constitutional treatment at the baths; the latter being acknowledged to be particularly important.

In Aix-la-Chapelle, as regards the usual cases of illness, local treatment—which has been proved by experience and scientific research to be very important—is naturally not neglected; but on the other hand it is well known, that many patients in whom local measures have failed to effect a cure after many years have finally been thoroughly cured by using the hot baths, and submitting to the constitutional treatment, as practised in Aix-la-Chapelle.

In the treatment of these diseases it is of the utmost importance that the patient should reside in the neighborhood of the baths during at least from four to six weeks, or, if possible, till every sign of disease has disappeared. Patients are required to remain a considerable time in the water,—generally about an hour; if necessary, two baths a day may be taken. The temperature of these baths must not be too great, as otherwise patients are too easily fatigued; the age and constitution of individual patients must be taken into consideration. Baths of long duration are easily borne even by very young patients. In most cases ordinary baths of sulphur water produce the required results in skin diseases,

¹“Eczema and its Management,” by Dr. L. Duncan Bulkley, 1882, p. 21.

but in some cases, where it is found necessary to strengthen and stimulate the action of the skin, warm sulphur-water douches are used. Hot sulphur steam-baths are of very great importance to those patients in whom the skin is greatly thickened, with a tendency to become scaly.

As the Springs at Aix-la-Chapelle, and the neighboring town of Burtscheid, vary in strength and warmth, we are easily enabled to give patients the change of treatment so often necessary in chronic cases.

It is necessary to explain to patients who have suffered from skin disease for years before coming to us, that after being cured here the eruption may appear again; it is, therefore, prudent to repeat the treatment. This becomes necessary partly because the majority of patients, on their return home, resume their old manner of living, probably vitiating the blood and thus bringing about a return of the old illness. The results of our treatment are then very apparent in the mildness of the returning disease, over which it is possible to exercise full control. In many cases a full and final cure is possible, and to this end both doctor and patient must persevere.

Our treatment is very considerably facilitated by the handsome bath-houses, where every thing is tastefully arranged and most thoroughly adapted to the comfort and requirements of every patient. The bathing-houses, eight in number, contain on the ground floor excellent arrangements for ordinary baths, douches—the best in Europe,—steam-baths, and sweating-rooms, and all have a spring where patients can drink the waters during bad weather. The immense quantity of water and the number of baths (about one hundred and ten) enable several hundred patients to bathe every day. Separate private baths for ladies are set apart in some bathing-houses.

In Aix-la-Chapelle the treatment is carried on during the whole year; the bath-houses are always open and in use, for the mildness of our continental winters has gradually created a winter season; numbers of English, Swedes, and Russians are constantly visiting the town.

Eleven years' observations¹ at our meteorological station give an average temperature for

November	of	+5.3° C. (42 ° F.)	with snow on 2 days.
December	"	-0.9° C. (30° F.)	" " " 7 "
January	"	+1.9° C. (35° F.)	" " " 6 "
February	"	+4.1° C. (40 ° F.)	" " " 7 "
March	"	+5.6° C. (43 ° F.)	" " " 9 "
April	"	+9.6° C. (49 ° F.)	" " " 3 "

This winter we have had neither snow nor frost, and consequently the number of winter patients has been very high.

Many years of medical experience prove the advisability of a winter treatment for skin diseases.²

If we examine more carefully the special cases in the group of skin diseases most frequently met with at Aix-la-Chapelle, we find that a good field for the operations of our bathing treatment is offered by chronic eczema. To this class belong all those cases which seem to revive in spring and autumn, and also those which are not influenced by the seasons. Those diseases brought on by continued local ailment, or by the unhealthiness of any particular organ, belong also to this class; finally, also, those cases from which we can draw no conclusion as to their etiology.

We learn here, that several forms of the catarrhal affection of the skin are benefited by the waters. Besides eczema papulosum, e. pustulosum, and e. rubrum (which is liable to produce ulcers), our attention is particularly called to the final development of the different forms of eczema, to eczema squamosum. The itching attendant on these diseases is most satisfactorily lessened here. The skin lesions gradually become less in extent, the hard infiltrations disappear, and a normal condition of the epidermis is gradually arrived at. Many of the worst cases of eczema, which had spread over the upper and lower extremities of the patient, and would not admit of any local application, have

¹ "The Climatic Winter Watering-places of Central Europe and Italy," by Dr. H. Peters, 1881, p. 31.

² "Winter Treatment at Aix-la-Chapelle," by Dr. Reumont, 1867.

finally yielded to the continual use of baths, and have been thoroughly cured.

We can also recommend the sulphur-water baths for pustular affections of the skin. This group is represented principally by acne, the consequence of limited inflammation of the follicles of the skin (*acne disseminata*). The best results are achieved in our treatment of *acne scrofulosorum* and *acne cachecticorum*; but sometimes the patient must reside near the baths for at least several months. The thick, scaly infiltrations, often so painful, gradually disappear, generally before suppuration sets in; at the same time the system is strengthened and the patient fully restored to health.

The treatment of furunculosis, frequently observed here, is less remarkable for its rapid and painless cure, than for the way in which the whole system is acted upon, and a return of the disease rendered very doubtful.

Psoriasis (*lepra Willani*) is met with here in all its stages. Local treatment has of late years worked wonders in curing psoriasis. But the more we know of this extremely obstinate, wide-spreading complaint, the more we are convinced of the good done by the baths, either with or without the aid of other medicines; and here more especially our attention is called to the connection between local and general treatment at the warm springs.

We do not deny that internal medication is of importance after treatment at Aix-la-Chapelle. When the treatment here has removed all the diseased appearances on the skin, it is sometimes found advisable to resort to constitutional measures, giving such preparations as copper and arsenic at stated intervals for a year. By this means the tendency to a return of the psoriasis is greatly lessened.

The perfect system of our bath routine is exactly suited to the thorough treatment of psoriasis. In a proportionately short time the scaliness and the itchiness of the skin, so frequently met with in these cases, decrease, and are finally altogether driven out by the use of our baths.

Our douches and steam-baths (gases and steam of our waters) are particularly excellent in obstinate, torpid cases.

They act by strongly exciting the functions of the skin, through their energetic action on the nerves, on the blood- and lymphatic vessels, and on the glands of the skin, by pushing out diseased and renewing healthy matter.

In these cases it is important, as far as the prognosis is concerned, to know the age of the patient and the length of time he has been suffering from the disease. Patients from ten to twenty years of age are the best subjects for perfect cures, if they are free from any taint of hereditary disease. But a repetition of the treatment is generally necessary. If the disease has been going on for years, and although apparently cured by local treatment it has invariably broken out afresh, we must insist on the patient looking forward to courses of treatment for from two to three years.

We have had several young ladies here who have been thoroughly and lastingly cured by our treatment in from five to eight weeks. In most cases, however, a repetition of the treatment was rendered necessary in a year's time by the reappearance, in a milder form, of the disease. In a few instances the eruption reappeared after an interval of two years, but a repetition of the course of treatment at Aix-la-Chapelle gave a final decided result. From our experience we can recommend the bathing treatment here, not only for the rapidity with which it cures all outward signs of the disease, but also for strengthening the system and eradicating the tendency to psoriasis.

In the group of papular inflammations of the skin, in Aix-la-Chapelle, we find that prurigo is favorably influenced by our waters. We have on several occasions succeeded in producing good results in cases of this kind which, though mild, were well developed. The papular infiltrations disappeared and the itching was removed; excoriations of the skin and the swelling of the glands were gradually healed. Usually in these cases of prurigo there were signs of general debility, similar to those in furunculosis and acne cachecticorum, and both were favorably influenced by our treatment. In America and England this disease is reported as occurring very rarely; Dr. Tilbury Fox first described it. Still at the London International Medical

Congress last year, several well-developed cases were seen by us, a fact casting serious doubt on the rarity of the disease.

Cases of pruritus cutaneus are more frequently met with here than prurigo. Signs of the itching were to be found in some cases without any apparent external cause, either all over the skin or principally about the mouth, eyes, genital organs, and anus. In many cases of pruritus some internal organs showed signs of disease, and menstruation was irregular; in the latter cases the vainly expected menstruation was preceded by from eight to ten days of unbearable itching. Others suffered most probably from irregularities of the stomach and from the so-called hemorrhoids. One case was combined with chronic nicotine (tobacco) intoxication. In many cases different members of the same family were affected by pruritus.

In a few particular cases it was difficult to decide whether the slightly developed dry catarrh of the skin was the original cause or only a consequence of pruritus. Both disappeared under our treatment, but generally showed a tendency to return. The success of our treatment was, on the whole, satisfactory, especially when the internal disturbances were favorably influenced by our waters.

To this class belong all those ailments of the abdomen which benefit by thermal treatment.

That form of pruritus which shows itself in the later years of life in connection with senile decay of the skin (pruritus senilis), has sometimes benefited by our treatment. The most obstinate cases were those of pruritus in middle-aged patients whose constitution and skin seemed to be in a normal condition. With these often only a transitory result was arrived at. Experienced Aix-la-Chapelle physicians recommend the baths for lupus when it appears after scrofula. We have not personally met with such cases.

During the last few years we had two cases of true leprosy from Brazil. These cases were not of a tubercular character, but appeared with anæsthesia and discoloration of the skin, accompanied by a general feeling of illness. These cases derived such great benefit from the baths, that we consider ourselves justified in calling attention to them.

We conclude with an important class of skin diseases, which, although they do not primarily originate in the skin, appear on its surface in a secondary manner, and therefore are justly classed in this group. We refer to the ulcerated sores on and in the skin of the shins. In this large city, with its population of about 90,000 souls, we have every opportunity of studying these cases, and are quite willing to acknowledge the beneficial results of local treatment. But our experience of various most extensive and serious cases, during several years, has taught us, that in curing these sores, our bathing treatment is most valuable and important. We use the baths either with or without local treatment, with the view of not only healing the ulcerated sores, but also of retaining the successful results. We ascribe the importance of our thermal treatment to its action upon the original causes of ulcerated shins, because it changes and stimulates the disturbed circulation of the blood and improves the eczema, the scrofula, and the gout, which often co-exist in these cases.

All this suffering is by no means the sad privilege of the poorer classes. Most of our patients come from the upper classes of society. Frequently the ulcerated sores had already been healed by local treatment, but the inevitable return of the malady brings the patients naturally to Aix-la-Chapelle. In most cases the disease appears in middle-aged and old people. In slight cases no ulcers were to be found; but there appeared œdematous swellings of the skin, especially round the joints of the foot, which, by their pressure on the nerves, brought on paræsthetic sensations, shivering and cramps. In more developed cases inflammation in and round the veins was visible, followed by a thickening and discoloration of the skin, by eczema, and by pruritus. In fully developed cases the ulcerated sores showed themselves generally in two forms, seldom found united in the same patient.

In the first case the characteristic *ulcus cruris* was visible, at times with a pair of ulcers originating probably from a blow or from scratching. In the second case we found that along the skin of the shins, seemingly without any direct

cause, several irregular, generally small superficial sores had been formed, the diseased parts having loose, indistinct edges, often connected by a thin ridge of skin. These little ulcers bled very easily, and were rendered excessively painful by the nerves being laid bare by the sores, thus becoming a great hindrance to a patient in the daily performance of professional duties. In the first case the veins were generally enlarged and the extremities of the patient more or less emaciated. The last cases were not generally connected with any serious enlargement of the veins, but, on the other hand, the panniculus adiposus was strongly developed.

In the treatment of ulcerated shins and the different stages of the disease, the use of our baths, and especially of our warm douches, was found to be of very marked benefit.

In the above chapter we have endeavored to lay before the professional reader, in a cursory manner, an important class of diseases which may be successfully treated at Aix-la-Chapelle. The opinions and views we have advanced are throughout founded on our own personal experience, and we shall be satisfied that our aim has been attained, if the work meets with the willing interest to which our common wants entitle it.